

Appl. No. 10/616,596
Atty. Docket No. 8283D
Amdt. dated April 26, 2006
Reply to Office Action of March 6, 2006
Customer No. 27752

CURRENT LISTING OF CLAIMS

1. (Original) A process for making a fibrous structure, the process comprising the steps of:
providing a deflection member comprising a macroscopically monoplanar, patterned framework having a backside forming an X-Y plane and a web-side opposite to the backside, wherein the framework comprises a plurality of bases extending from the X-Y plane in a Z-direction perpendicular to the X-Y plane, and a plurality of suspended portions laterally extending from the plurality of bases in at least one direction substantially parallel to the X-Y plane and elevated in the Z-direction from the X-Y plane to form void spaces between the X-Y plane and the suspended portions;
providing a plurality of fibers on the deflection member, thereby forming a partly-formed fibrous structure; and
separating the partly-formed fibrous structure from the deflection member, thereby forming the fibrous structure.
2. (Original) The process according to Claim 1, further including the step of deflecting a portion of the plurality of fibers into the deflection conduits so as to cause some of the deflected fibers or portions thereof to be disposed within the void spaces.
3. (Original) The process according to Claim 2, wherein the step of deflecting a portion of the plurality of fibers into the deflection conduits forms in the fibrous structure a plurality of micro-regions including fibrous cantilever portions formed by the fibers deflected into the void spaces formed between the X-Y plane and the suspended portions.

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4. (Original) The process according to Claim 1, wherein the step of providing a deflection member comprises providing a deflection member having the framework that comprises a multi-layer structure formed by at least a first layer and a second layer joined together in a face-to-face relationship such that the first layer comprises the plurality of bases, and the second layer comprises the plurality of suspended portions.
5. (Original) The process according to Claim 4, wherein each of the first and second layers has a top surface, a bottom surface opposite thereto, and a conduit portion extending between the top and bottom surfaces, the conduit portions being structured and designed to receive a portion of the plurality of fibers therein.
6. (Original) The process according to Claim 1, wherein the step of providing a deflection member comprises providing a deflection member having a reinforcing element joined to the framework and disposed between the web-side and at least a portion of the backside of the framework.
7. (Original) The process according to Claim 1, further comprising a step of pressing the deflection member having the partly-formed fibrous structure thereon against a pressing surface, thereby densifying portions of the partly-formed fibrous structure.
8. (Original) The process according to Claim 1, wherein the step of providing a deflection member comprises providing a deflection member in which the plurality of bases comprises a substantially continuous pattern, a substantially semi-continuous pattern, a pattern formed by a plurality of discrete protuberances, or any combination thereof.

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9. (Original) The process according to Claim 1, wherein the step of providing a deflection member comprises providing a deflection member in which the plurality of suspended portions comprises a substantially continuous pattern, a substantially semi-continuous pattern, a pattern formed by a plurality of discrete protuberances, or any combination thereof.
10. (Original) The process according to Claim 1, wherein the step of providing a deflection member comprises providing a deflection member that is fluid-permeable.
11. (Original) The process according to Claim 10, further including the step of deflecting a portion of the plurality of fibers into the deflection conduits by applying a fluid pressure differential to the plurality of fibers.
12. (Original) The process according to Claim 11, wherein the fluid pressure differential comprises a vacuum pressure.
13. (Original) The process according to Claim 1, further including the step of deflecting a portion of the plurality of fibers by overlaying the plurality of fibers disposed on the deflection member with a flexible sheet of material having a fluid-permeability less than a fluid-permeability of the deflection member and applying a fluid pressure differential to the flexible sheet of material, thereby deflecting portions of the flexible sheet towards the deflection member.
14. (Original) The process according to Claim 1, wherein the plurality of fibers comprises a moistened fibrous web.

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15. (Original) The process according to Claim 1, wherein the step of providing a plurality of fibers comprises providing a plurality of fibers selected from the group consisting of papermaking cellulosic fibers, synthetic fibers, or any combination thereof.
16. (Original) A process for making a fibrous structure having at least two regions disposed in a non-random repeating pattern, the process comprising the steps of:

providing a deflection member having a plurality of fibers thereon, the deflection member comprising a reinforcing element joined to a macroscopically monoplanar, patterned, and fluid-permeable framework having a web-side and a backside opposite to the web-side, wherein the framework comprises a plurality of bases outwardly extending from the reinforcing element, and a plurality of suspended portions laterally extending from the plurality of bases and elevated from the reinforcing element to form void spaces between the reinforcing element and the suspended portions;

deflecting a portion of the plurality of fibers into the deflection conduits so as to cause some of the deflected fibers or portions thereof to be disposed within the void spaces formed between the reinforcing element and the suspended portions, thereby forming a first region comprising fibers not deflected into the deflection conduits, and a second region comprising fibers deflected into the deflection conduits, the second region including fibrous cantilever portions formed by the fibers deflected into the void spaces formed between the reinforcing element and the suspended portions of the deflection member.
17. (Original) The process according to Claim 16, wherein the plurality of fibers comprises a moistened fibrous web.

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18. (Original) The process according to Claim 16, wherein the step of providing a plurality of fibers comprises providing a plurality of fibers selected from the group consisting of papermaking cellulosic fibers, synthetic fibers, or any combination thereof.
19. (Original) The process according to Claim 16, wherein the step of providing a deflection member comprises providing a deflection member in which the plurality of bases comprises a substantially continuous pattern, a substantially semi-continuous pattern, a pattern formed by a plurality of discrete protuberances, or any combination thereof.
20. (Original) The process according to Claim 16, wherein the step of providing a deflection member comprises providing a deflection member in which the plurality of suspended portions comprises a substantially continuous pattern, a substantially semi-continuous pattern, a pattern formed by a plurality of discrete protuberances, or any combination thereof.